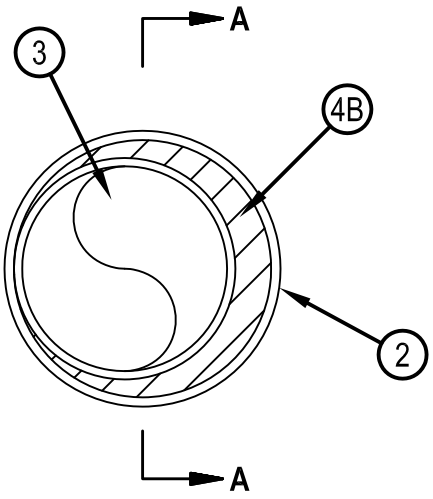
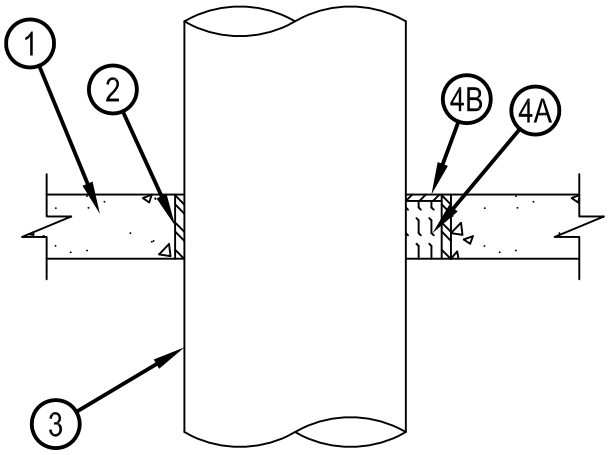
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1119

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft





SECTION A-A

1. Floor Assembly — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Floor may also be constructed of any UL Classified Precast Concrete Units*. Max diam of opening is 10-5/8 in. (270 mm). In precast concrete unit floors, max diam of opening is 7 in. (178 mm).
   See Precast Concrete Units (CFTV) category in Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve — (Optional) For use in concrete floors only. Nom 10 in. (254 mm) diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor assembly, flush with floor surfaces.

2A. Sheet Metal Sleeve — (Optional) For use in concrete floors only. Max 6 in. (152 mm) diam, min 26 ga galv steel provided with a 26 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and be flush with floor surfaces.

2B. Sheet Metal Sleeve — (Optional) - For use in concrete floors only. Max 10 in. (254 mm) diam, min 24 ga galv steel provided with a 24 ga galv steel square flange spot welded to the sleeve at approx mid-height, or flush with bottom of sleeve in floors, and sized to be a min of 2 in. (51 mm) larger than the sleeve diam. The sleeve is to be cast in place and be flush with both floor surfaces.

3. Through-Penetrant — One metallic pipe, conduit or tubing installed concentrically or eccentrically within opening. Annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 2 in. (51 mm). Penetrant to be rigidly supported on both sides of floor assembly. The following types and sizes of penetrants may be used:
   A. Steel Pipe — Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   D. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT).

System No. F-A-1119

4. Firestop System — The details of the firestop system shall be as follows:

A. Packing Material — Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material. In floors constructed of precast concrete units, packing material to be flush with bottom of floor.

B. Fill, Void or Cavity Materials* - Sealant — Min 1/4 in. (6 mm) thickness of sealant applied within the annulus, flush with top surface of floor. For L Rating, apply a min 1/4 in. (6 mm) bead of sealant at penetrant/concrete interface on top surface of floor and over top end of sleeve to overlap onto concrete floor around periphery of opening.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 604 Self Leveling Sealant, CFS-S SIL GG or CFS-S SIL SL Sealant

*Bearing the UL Classification Mark